Compared to the general population, PLWH have higher rates of tobacco use and alcohol abuse diagnosis. Pregnancy and previous unsuccessful quit attempt are also higher among PLWH.

Overall, 27 (45%) participants made a 24-hour quit attempt. We hypothesized that patients with drug and alcohol abuse would have smaller changes in smoking cessation outcomes in PLWH who smoke. We performed a prospective single arm study integrating an ambulatory smoking cessation decisional algorithm in our HIV clinic. We hypothesized that patients with drug and alcohol abuse would have smaller changes in smoking behaviors than those without.

**Methods**
- Participants were PLWH attending HIV clinic at the Medical University of South Carolina.
- Adults (age > 18y), English-speaking, and able to consent
- Smoking at least 5 cig/day, regardless of motivation to quit smoking
- 60 patients enrolled, Nov 2015 – Oct 2016
- Study Interventions
  - Initial visit: Completed surveys and algorithm via computer and cessation medications prescribed according to the algorithm
  - Cessation medications obtained according to standard of care, including copayment, drug formulary, prior-authorization, etc
  - Phone follow-up visits (1 and 3 months)
  - Participants compensated up to $160
- Primary outcomes were to assess changes in smoking behavior and use of cessation medications
- Secondary outcome was to compare changes in smoking behavior among patients with and without drug and alcohol abuse
- Demographic, clinical, and socioeconomic data was collected via chart review
- Analysis was performed using SPSS 24
  - Paired t-test for continuous and chi-squared for dichotomous variables

**Results**
- Baseline demographics are represented (Table 1)
  - High rates of alcohol and substance use was found (Table 1)
  - Patients showed significant changes over time towards healthier behaviors (Table 2)
    - Tobacco use (cigarettes per day, p<0.00)
    - Nicotine dependence (p<0.00)
    - Motivation to quit (p<0.00)
    - Patients with alcohol and substance abuse had similar decreases in cigarettes
    - Overall, 27 (45%) participants made a 24-hour quit attempt

**Conclusions**
- The algorithm was successful in engaging all participants to use cessation medications and change smoking behaviors regardless of motivation to quit.
- Patients with substance and alcohol abuse had similar changes in smoking behavior.
- A decisional algorithm may be a simple way to engage patients, even those with other addictions, in smoking cessation.

**Table 1**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Baseline</th>
<th>3 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years, range)</td>
<td>48 (22-63)</td>
<td></td>
</tr>
<tr>
<td>Male (n, %)</td>
<td>40 (67%)</td>
<td></td>
</tr>
<tr>
<td>African-American (n, %)</td>
<td>43 (72%)</td>
<td></td>
</tr>
<tr>
<td><strong>Self-reported Use</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harmful Alcohol Use (Audit 8 or higher)</td>
<td>13 (22%)</td>
<td></td>
</tr>
<tr>
<td>Treatment for Substance Abuse</td>
<td>21 (35%)</td>
<td></td>
</tr>
<tr>
<td>Substance Use Disorder (DAST 6 or higher)</td>
<td>9 (15%)</td>
<td></td>
</tr>
<tr>
<td><strong>Diagnostics Per Chart Review</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcohol Abuse</td>
<td>12 (20%)</td>
<td></td>
</tr>
<tr>
<td>Substance Abuse</td>
<td>11 (18%)</td>
<td></td>
</tr>
<tr>
<td><strong>CD4 Count (mean, range)</strong></td>
<td>622 (9-1820)</td>
<td></td>
</tr>
<tr>
<td>HIV VL (copies/mL)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VL &lt; 40 (n, %)</td>
<td>42 (70%)</td>
<td></td>
</tr>
<tr>
<td>VL &lt; 200 (n, %)</td>
<td>49 (82%)</td>
<td></td>
</tr>
<tr>
<td>On ART (n, %)</td>
<td>58 (97%)</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 1. Algorithm for Treatment of Smoking Cessation**

- Varenicline + NRT
- Bupropion + NRT
- Prescribe Varenicline
- Contraindications Varenicline:
  - Suicide
  - Kidney Impairment
  - MAOI use
  - Pregnancy

- Previous Unsuccessful Quit Attempt
- Consider Bupropion plus NRT
- Contraindications Bupropion:
  - Suicide
  - MAOI use
  - Pregnancy
  - Seizures
  - Eating Disorder

- Previous Unsuccessful Quit Attempt
- Consider 2 NRT

- Baseline vs 3 months:

  - Cigarettes/day (mean) Total
  - Cig/Day with Alcohol Abuse Diagnosis
  - Cig/Day with Substance Abuse Diagnosis
  - Nicotine dependence (FTND) mean
  - Motivation to Quit (ARME)

**Acknowledgements**
We thank the staff and patients of the Medical University of South Carolina for their help and support.

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